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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,443	02/13/2004	Peter Kurczynski	3-9	8967

7590 07/26/2005

Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawfords Corner Road
Holmdel, NJ 07733-3030

EXAMINER

AMARI, ALESSANDRO V

ART UNIT PAPER NUMBER

2872

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/779,443

Applicant(s)

KURCZYNSKI ET AL.

Examiner

Alessandro V. Amari

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to because of the following informalities:

Regarding claim 6, lines 1-2, the phrase, "at least a second voltage" is confusing since there is no prior mention of a first voltage in the preceding claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii et al US 5,880,896.

In regard to claim 1, Ishii et al discloses (see Figure 2) a monolithic adaptive optic mirror comprising a deformable mirror structure (10) having at least a first reflective side and a second side as described in column 8, lines 66-67 and column 9, lines 1-5, a first layer of transmissive electrodes (8) disposed on said mirror structure in electrostatic proximity to said first reflective side; a support structure (6) adapted to support said deformable mirror structure, said support structure further adapted to support a second layer of transmissive electrodes (12) in electrostatic proximity to said second side of said mirror as described in column 8, lines 40-67 and column 9, lines 1-5. It should be noted that the first and second layers of transmissive electrodes of Ishii

et al are interpreted as reading on the claimed invention in light of the first and second layers of transmissive electrodes shown in Figures 3-5 of the claimed invention.

Regarding claim 2, Ishii et al discloses that said first layer of transmissive electrodes is disposed in an optical path of at least a first optical signal as is shown in Figure 2.

Regarding claim 3, Ishii et al discloses (see Figure 2) that said mirror structure is bonded (via 57a, 57b) to at least a first surface (59) of said support structure, this forming a single integrated package as shown in Figure 2 and as described in column 9, lines 47-52.

Regarding claim 4, Ishii teaches that said first surface is an insulating surface as described in column 8, lines 48-52. Although the prior art does not specifically teach that the first surface is an insulating surface, this is seen as an inherent teaching of the device since the first surface which is part of the support structure must be an insulator in order for the device to operate as intended.

Regarding claim 5, Ishii et al discloses (see Figures 2, 3) that at least a first voltage (via element 7) passed over at least one of said electrodes in said first layer of electrodes causes said first reflective side of said mirror structure to be attracted toward said at least one of said electrodes in said first layer as described in column 10, lines 28-34.

Regarding claim 6, Ishii et al discloses (see Figures 2, 3) that at least a second voltage (via element 7) passed over at least one of said electrodes in said second layer of electrodes causes said first reflective side of said mirror structure to be attracted

toward said at least one of said electrodes in said second layer as described in column 10, lines 13-35.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Magel US 5,223,971, Kurczynski et al US 6,639,710 and Martin US 4,387,973 all teach a deformable mirror deformed by way of electrostatic forces. Nishioka et al US 6,464,363 teaches a deformable mirror shaped by way of electrostatic forces as shown in Figures 4 and 5. Stappaerts US 6,791,735 teaches a MEMS mirror which is displaced via electrostatic forces.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alessandro V. Amari whose telephone number is (571) 272-2306. The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ava *ava*
23 July 2005

Alessandro Amari
Alessandro Amari
Examiner AU 2872